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ABSTRACT

The development and validation of a new instrument, the School-Level Environment Questionnaire (SLEQ), are described. The SLEQ measures teachers' perceptions of psychosocial dimensions of the environment of the school. The SLEQ consists of 56 items, each scored on a five-point scale, and grouped in eight scales: (1) student support; (2) affiliation; (3) professional interest; (4) staff freedom; (5) participatory decision making; (6) innovation; (7) resource adequacy; and (8) work pressure. The SLEQ was validated with three samples from Australian schools: 83 teachers from 19 metropolitan elementary and secondary schools in Sydney; 34 secondary school beginning teachers in New South Wales; and 109 elementary and secondary teachers in Tasmania. Results indicate that each SLEQ scale displayed satisfactory internal consistency with satisfactory discriminant validity results, suggesting that distinct, but somewhat overlapping, aspects of school environment were measured. The SLEQ was used, in the Tasmanian sample, to determine differences in the climates of elementary and secondary schools. It was also used to evaluate teachers' efforts to improve school environment in a study of 15 elementary teachers in a pretest/posttest evaluation of improvement efforts. Four tables and two graphs present data from these studies; an appendix provides the SLEQ. A 33-item list of references is included. (SLD)

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VALIDITY AND USE OF THE SCHOOL-LEVEL ENVIRONMENT QUESTIONNAIRE

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Over the last decade or so, the concept of school environment has appeared in the educational literature with increasing frequency. In fact the literature suggests that, together with curriculum, resources, outcomes and leadership, environment makes a major contribution to the effectiveness of a school (Creemers, Peters & Reynolds, 1989). The term environment has been taken by Tye (1974) to mean a set of factors which "gives each school a personality, a spirit, a culture". The study of school environment is clearly important because it is likely to contribute to understanding and improvement of the school's functioning and to satisfaction and productivity within the school.

Despite this, relatively little work has been directed towards helping teachers assess and improve the environments of their own schools. Practical constraints inhibiting teachers' use of the school environment instruments include difficult access to instruments, the fact that many existing instruments lack economy in terms of testing and scoring time, and the unavailability of case studies of teachers' successful attempts at improving school environments.

Paper presented at annual meeting of American Educational Research Association, Boston, April 1990.

Consequently this article describes the development and validation of a new instrument, the *School-Level Environment Questionnaire (SLEQ)*, which measures teachers' perceptions of psychosocial dimensions of the environment of the school. Our work with the SLEQ grows out of previous work with Moos's (1981) Work Environment Scale (WES), including the use of a strategy for promoting school improvement. For teachers and schools, the SLEQ has three major advantages over the WES: firstly, it is more accessible for teachers; secondly, it has been designed specifically for use in schools; and, thirdly, it is somewhat more economical in terms of testing and scoring time.

Distinction between School-Level and Classroom-Level Environment

A useful distinction can be drawn between school-level and classroom-level environment (Fraser & Rentoul, 1982; Genn, 1984). Whereas classroom climate might involve relationships between teachers and their students or among students, school climate might involve a teacher's relationships with other teachers, senior staff and the school principal. Student perceptions are used frequently to measure classroom environment, but they are used seldom in measuring school climate because it is felt that students could be unaware of many aspects of the school-level environment. The school environment can also be considered more global than the classroom environment. Furthermore, classroom-level environment research has been based on different theoretical and conceptual foundations from school-level environment research. The theoretical underpinnings of classroom environment research are described in several reviews (e.g. Chavez, 1984; Fraser, 1986, 1989; Fraser & Walberg, in press; Moos, 1979; Walberg, 1979), whereas school environment research has been associated with the field of educational administration and rests on the assumption that schools can be viewed as formal organisations (Anderson, 1982; Thomas, 1976).

Educational researchers internationally have paid substantial attention to studies involving students' perceptions of classroom-level environment (Fraser, 1986), but research on teachers' perceptions of school-level environment has received less attention. Consequently, in order to facilitate future school environment research, a preliminary aim of the present paper is to report some of the first uses of the School-Level Environment Questionnaire in measuring teachers' perceptions of their school environment. Another aim of this paper is to describe applications of this instrument, including teachers' attempts to improve the psychosocial environments of their schools.

In the approach to environmental change focussed upon in this paper, feedback information based on teacher perceptions is employed as a basis for reflection upon, discussion of and systematic attempts to improve school environments. The basic logic underlying the approach has been described by Fraser (1981) and involves, first, using assessments of teacher perceptions of both their actual and preferred school environment to identify discrepancies between the actual environment and that preferred by teachers and, second, implementing strategies aimed at reducing existing discrepancies.

Assessment of School Environment

Moos (1974) has found that the same three general categories can be used in conceptualising the individual dimensions characterising diverse psychosocial environments. This finding has emerged from Moos's work in a variety of environments including hospital wards, school classrooms, prisons, military companies, university residences and work milieus. The three basic types of dimensions are: *Relationship Dimensions* (e.g. peer support, involvement) which identify the nature and intensity of personal relationships within the environment and assess the extent to which people are involved in the environment and the extent to which they support and help each other; *Personal*

Development Dimensions (e.g. autonomy, competition) which assess the basic directions along which personal growth and self-enhancement tend to occur; and *System Maintenance and System Change Dimensions* (e.g. innovation, clarity, work pressure) which involve the extent to which the environment is orderly, clear in expectations, maintains control and is responsive to change.

Examples of school environment instruments include: the College Characteristics Index (CCI; Pace & Stern, 1958) which measures student or staff perceptions of 30 environment characteristics; the High School Characteristics Index (HSCI; Stern, 1970) which is an adaptation of the CCI; and the widely used Organizational Climate Description Questionnaire (OCDQ; Halpin & Croft, 1963).

The Work Environment Scale (WES; Moos, 1981), discussed earlier, was designed for use in any work milieu rather than for use specifically in schools. However, the WES's 10 dimensions are well suited to describing salient features of the teacher's school environment, even though it has had very little usage specifically in school settings. To improve the WES's face validity for use in schools in our previous research, the word 'people' was changed to 'teachers', the word 'supervisor' was changed to 'senior staff' and the word 'employee' was changed to 'teacher' (Fraser, Docker & Fisher, 1989).

Because the WES is one of the first instruments to be used in a school improvement study and because our work with the SLEQ is linked with previous work with the WES, the next section provides some background information about the WES.

Description and Validation of WES

The Work Environment Scale (WES) consists of 10 scales altogether, with three measuring Relationship Dimensions (Involvement, Peer Cohesion, Staff

Support), two measuring Personal Development Dimensions (Autonomy, Task Orientation) and five measuring System Maintenance and System Change Dimensions (Work Pressure, Clarity, Control, Innovation, Physical Comfort). The WES consists of 90 items of True/False response format, with an equal number of items in each of the 10 scales.

The WES was used for the first time specifically with school teachers in a study conducted among Australian science teachers (Fisher & Fraser, 1983). The slightly modified version of the WES was administered to a sample of 114 science teachers in a representative sample of 35 secondary schools in Tasmania. Further validation data were generated in a more comprehensive study in Tasmania (Docker, Fisher & Fraser, 1989) with a sample that included elementary schools as well as secondary schools. Furthermore, whereas the previous study involved only the actual form of the WES, the new sample responded to both the actual form (what the environment is actually like) and the preferred form (what teachers would prefer the environment to be like). The total sample consisted of 34 schools, with 599 teachers responding to the actual form of the WES and 543 teachers responding to the preferred form.

Table 1 reports internal consistency and discriminant validity statistics for these two samples of teachers. Because applications of school environment instruments could involve the school mean rather than the individual teacher as the unit of analysis, data are reported for both. Overall the data in Table 1 indicate that the WES scales display satisfactory internal consistency and measure distinct, although somewhat overlapping, aspects of school environment.

Table 1: *Internal Consistency (Alpha Reliability) and Discriminant Validity (Mean Correlation with Other Scales) for Actual and Preferred Forms of WES for Two Units of Analysis*

Scale	Unit of Analysis	Alpha Reliability			Mean Correlation with Other Scales		
		First Sample	Second Sample	Second Sample	First Sample	Second Sample	Second Sample
		Actual	Actual	Pref.	Actual	Actual	Pref
Involvement	Indiv	0.85	0.76	0.74	0.41	0.35	0.41
	School		0.93	0.91		0.48	0.50
Peer Cohesion	Indiv	0.60	0.72	0.69	0.33	0.31	0.39
	School		0.95	0.90		0.46	0.54
Staff Support	Indiv	0.66	0.71	0.68	0.29	0.30	0.36
	School		0.96	0.93		0.46	0.50
Autonomy	Indiv	0.61	0.60	0.55	0.27	0.32	0.33
	School		0.88	0.87		0.48	0.49
Task Orientation	Indiv	0.78	0.70	0.60	0.34	0.33	0.34
	School		0.97	0.91		0.49	0.49
Work Pressure	Indiv	0.74	0.79	0.70	0.16	0.11	0.28
	School		0.96	0.95		0.27	0.38
Clarity	Indiv	0.73	0.70	0.72	0.33	0.30	0.41
	School		0.90	0.95		0.41	0.54
Control	Indiv	0.64	0.64	0.62	0.18	0.17	0.11
	School		0.91	0.90		0.29	0.27
Innovation	Indiv	0.84	0.84	0.74	0.29	0.29	0.35
	School		0.98	0.95		0.44	0.47
Physical Comfort	Indiv	0.70	0.71	0.72	0.26	0.23	0.36
	School		0.93	0.94		0.38	0.45
Sample Sizes	Indiv	114	599	543	114	599	543
	School	35	34	34	35	34	34

Development of SLEQ

A careful review of potential strengths and problems associated with existing school environment instruments, including the WES, suggested that the SLEQ should satisfy the following six criteria (Rentoul & Fraser, 1983).

1. Relevant literature was consulted and dimensions included in the SLEQ were chosen to characterise important aspects in the school environment, such as relationships among teachers and between teachers and students and the organisational structure (e.g. decision making).
2. Dimensions chosen for the SLEQ provided coverage of Moos's three general categories of dimensions - Relationship, Personal Development and System Maintenance and System Change.
3. Extensive interviewing ensured that the SLEQ's dimensions and individual items covered aspects of the school environment perceived to be salient by teachers.
4. Only material which was specifically relevant to the school was included.
5. As a number of good measures of classroom environment instruments already exist, the SLEQ was designed to provide a measure of school-level environment which had minimal overlap with these existing measures of classroom-level environment.
6. In developing the SLEQ, an attempt was made to achieve economy by developing an instrument with a relatively small number of reliable scales, each containing a fairly small number of items.

It was found that the above criteria could be satisfied with an instrument consisting of seven scales altogether, with two measuring Relationship Dimensions (Student Support, Affiliation), one measuring the Personal Development Dimension (Professional Interest) and five measuring System Maintenance and System Change Dimensions (Staff Freedom, originally named Formalization, Participatory Decision

Making, originally named Centralization, Innovation, and Resource Adequacy). To complete the view of the school environment, a scale named Work Pressure has been added recently to the latter dimension.

The SLEQ consists of 56 items, with each of the eight scales being assessed by seven items. Each item is scored on a five-point scale with the responses of Strongly Agree, Agree, Not Sure, Disagree and Strongly Disagree. Table 2 further clarifies the nature of the SLEQ by providing a scale description and sample item for each scale and showing each scale's classification according to Moos's scheme. As well Table 2 provides information about the method and direction of scoring of SLEQ items.

In addition to an actual form which assesses perceptions of what a school work environment is actually like, the SLEQ also has a *preferred* (or ideal) form. The preferred form is concerned with goals and value orientations and measures perceptions of the school work environment ideally liked or preferred. Item wording is almost identical in the actual and preferred forms except that an item such as 'Teachers are encouraged to be innovative in this school' in the actual form would be changed to 'Teachers *would be* encouraged to be innovative in this school' in the preferred form. Appendix A contains a complete copy of the latest version of the actual form of the SLEQ.

Validation of SLEQ

Validation data are available for the SLEQ for three samples and include information about each scale's internal consistency (Cronbach alpha reliability) and discriminant validity (mean correlation of a scale with the other seven scales). The first sample in Table 3 consisted of 83 teachers from 19 coeducational government schools (seven elementary and 12 secondary) in the Sydney metropolitan area. The second sample consisted of 34 secondary school teachers, each in a different government high school

Table 2: *Description of Scales in the SLEQ and their Classification According to Moos's Scheme*

Scale Name	Description of Scale	Sample Item	Moos's General Category
Student Support	There is good rapport between teachers and students and students behave in a responsible self-disciplined manner.	There are many disruptive, difficult students in the school. (-)	Relationship
Affiliation	Teachers can obtain assistance, advice and encouragement and are made to feel accepted by colleagues.	I feel that I could rely on my colleagues for assistance if I should need it. (+)	
Professional Interest	Teachers discuss professional matters, show interest in their work and seek further professional development	Teachers frequently discuss teaching methods and strategies with each other. (+)	Personal Development or Goal Orientation
Staff Freedom	Teachers are free of set rules, guidelines and procedures, and of supervision to ensure rule compliance.	I am often supervised to ensure that I follow directions correctly. (-)	System Maintenance and System Change
Participatory Decision Making	Teachers have the opportunity to participate in decision making.	Teachers are frequently asked to participate in decisions concerning administrative policies and procedures. (+)	
Innovation	The school is in favour of planned change and experimentation, and fosters classroom openness and individualisation.	Teachers are encouraged to be innovative in this school. (-)	
Resource Adequacy	Support personnel, facilities, finance, equipment and resources are suitable and adequate.	The supply of equipment and resources is inadequate. (-)	
Work Pressure	The extent to which work pressure dominates the school environment.	Teachers have to work long hours to keep up with the workload. (-)	

Items designated (+) are scored by allocating 5, 4, 3, 2, 1, respectively, for the responses Strongly Agree, Agree, Not Sure, Disagree, Strongly Disagree. Items designated (-) are scored in the reserve manner. Omitted or invalid responses are given a score of 3.

in New South Wales. Each of these teachers at the time of the study was a beginning teacher in his or her first year of teaching after completion of preservice training. Approximately equal numbers of science and social science teachers, male and female teachers, and metropolitan and country schools made up the sample. The third sample consisted of 109 teachers in 10 elementary and secondary schools in Tasmania. The teachers in the third sample are the only ones who responded to the preferred form as well as to the actual form of the SLEQ. It should be noted that the recently added Work Pressure scale (based on a scale in the WES) was not in the form of the questionnaire which was administered to these samples; hence no validation statistic for this scale are included in Table 3.

Table 3 shows that the alpha coefficient for different SLEQ scales ranged from 0.70 to 0.91 for the first sample, from 0.68 to 0.91 for the second sample, from 0.64 to 0.85 for the actual form for the third sample, and from 0.64 to 0.81 for the preferred form for the third sample. These values suggest that each SLEQ scale displays satisfactory internal consistency for a scale composed of only seven items. The values of the mean correlation of a scale with the other scales shown in Table 3 range from 0.17 to 0.38 for the first sample; from 0.05 to 0.29 for the second sample; from 0.10 to 0.42 for the actual form for the third sample; and from 0.28 to 0.44 for the preferred form for the third sample. These values indicate satisfactory discriminant validity and suggest that the SLEQ measures distinct although somewhat overlapping aspects of school environment.

Another desirable characteristic of the actual form of any school environment instrument is that it is capable of differentiating between the perceptions of teachers in different schools. That is, teachers within the same school should perceive it relatively similarly, while mean within-school perceptions should vary from school to school. This characteristic was explored for each scale of the SLEQ's actual form for the sample of 109 teachers in 10 schools described in Table 3. A one-way ANOVA was

Table 3: *Internal Consistency (Alpha Reliability) and Discriminant Validity (Mean Correlation of Scale with other Scales) for each SLEQ Scale for Three Samples*

Scale	Number of Items	Form	Alpha Reliability			Mean Correlation with Other Scales		
			Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3
Student Support	7	Actual	0.70	0.79	0.85	0.19	0.19	0.10
		Pref			0.81			0.31
Affiliation	7	Actual	0.87	0.85	0.84	0.34	0.18	0.38
		Pref			0.77			0.42
Professional Interest	7	Actual	0.86	0.81	0.81	0.29	0.29	0.36
		Pref			0.77			0.43
Staff Freedom	7	Actual	0.73	0.68	0.64	0.31	0.05	0.30
		Pref			0.76			0.30
Participatory Decision Making	7	Actual	0.80	0.69	0.82	0.34	0.22	0.34
		Pref			0.74			0.28
Innovation	7	Actual	0.84	0.78	0.81	0.38	0.22	0.42
		Pref			0.77			0.31
Resource Adequacy	7	Actual	0.81	0.80	0.65	0.22	0.19	0.35
		Pref			0.64			0.44
Sample Size			83	34	109	83	34	109
			19	34	10	19	34	10

Note: No validation data for the new Work Pressure Scale are yet available.

described in Table 3. A one-way ANOVA was performed for each scale, with school membership as the main effect. It was found that each SLEQ scale differentiated significantly ($p<0.001$) between schools and that the eta^2 statistic (an estimate of the proportion of variance in SLEQ scores attributable to school membership) ranged from 0.16 to 0.40 for different scales.

Some Applications of School Climate Instruments

Differences Between Types of Schools

Docker, Fisher and Fraser (1989) reported use of the WES with the sample of 699 teachers described previously in Table 2 in investigating differences between the environment of various school types. When profiles of WES scale means were sketched for the various school types, reasonable similarity was found for preferred environment scales. That is, there was a fair degree of agreement among teachers in different types of schools as to what they would prefer their school environments to be like. In contrast, teachers' perceptions of their actual school environments varied markedly in that the climate in elementary schools emerged as more favourable than the environment of any of the secondary schools on most of the WES scales. For example, elementary schools were viewed as having greater Involvement, Staff Support, Autonomy, Task Orientation, Clarity, Innovation and Physical Comfort and less Work Pressure.

Recently the SLEQ has been used in exploring differences between the climates of elementary and secondary schools. The sample consisted of the 109 teachers in 10 schools in Tasmania comprising the third sample described in Table 3. Differences among the two types of schools were tested statistically for each SLEQ scale. The first step involved the performance of a one-way MANOVA in which the set of environment scales constituted the dependent variables and the type of school constituted the main effect. Because the multivariate test using Wilks'

lambda criterion was statistically significant ($p < 0.01$), the univariate ANOVA results were examined for each of seven scales individually. The findings are summarised in Figure 1.

The profiles depicted in Figure 1 reveal some clear general patterns of differences in the favourableness of the school environments in the types of schools. The most striking pattern is that the climate in elementary schools emerged as more favourable than the environment of secondary schools on most of the SLEQ scales. In particular, relative to secondary teachers, elementary teachers perceived their school climates considerably more favourably in terms of greater Affiliation, Professional Interest, Staff Freedom, Participatory Decision Making, Innovation and Resource Adequacy. Differences were greater than one standard deviation for Affiliation, Participatory Decision Making and Resource Adequacy.

Improving School Environments

The method proposed for improving school environments is based on techniques used successfully in the past for improving classroom-level environments (Fraser & Deer, 1983; Fraser & Fisher, 1986; Fraser, Seddon & Eagleson, 1982) and for improving the milieu of other human environments including psychiatric hospital wards (Pierce, Trickett & Moos, 1972), family therapy groups (Fuhr, Moos & Dishotsky, 1981), law enforcement agencies (Waters, 1978) and alcoholism treatment programs (Bliss, Moos & Bromet, 1976). This method involves the following fundamental steps:

1. *Assessment*. The actual and preferred forms of the instrument are administered to teachers.
2. *Feedback*. Teachers consider feedback information derived from scoring the instrument and summarised as profiles of mean school scores. Teachers find these profiles a useful way of depicting the data.

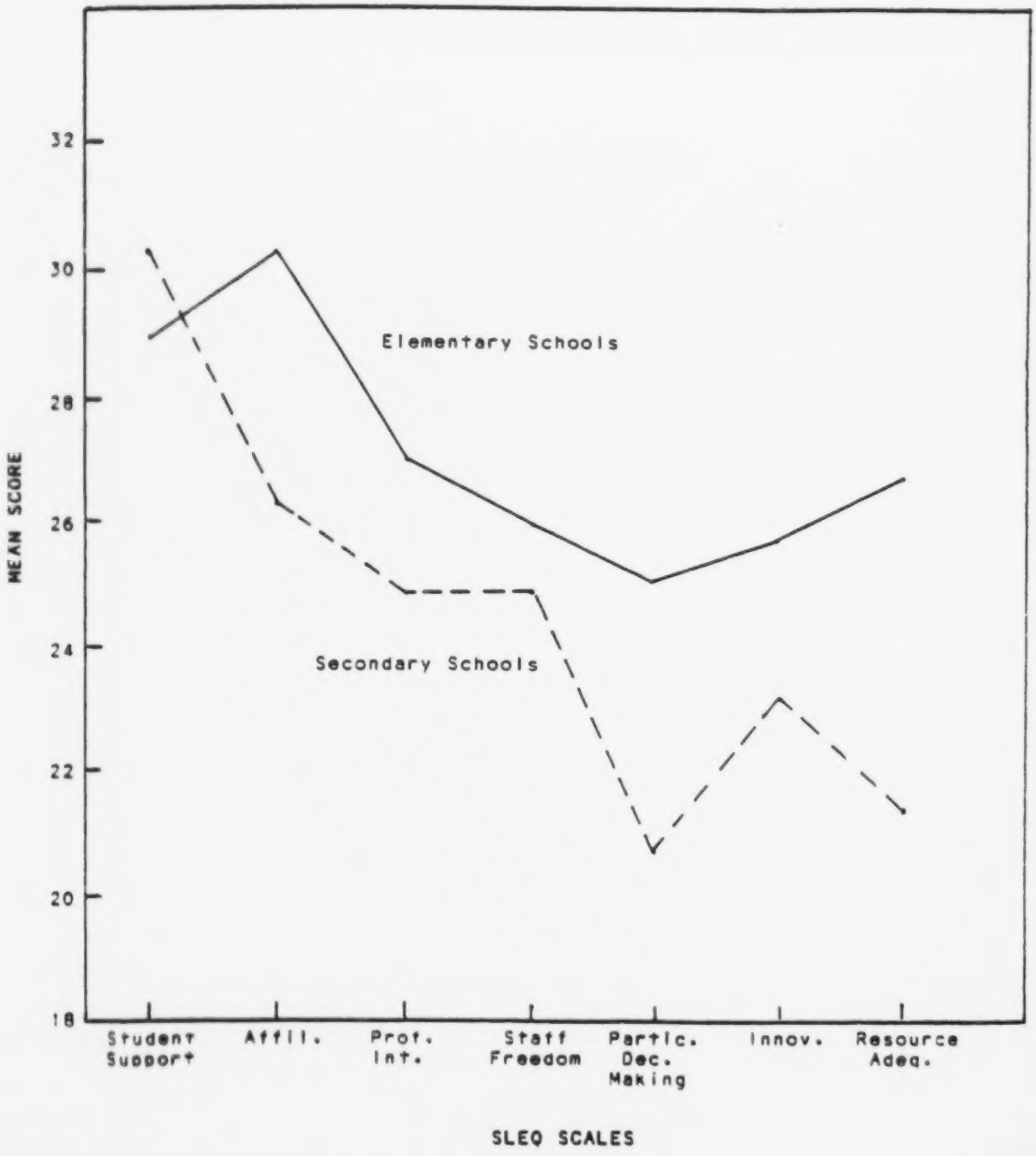

Figure 1: Profiles of Mean Environment Scores on the SLEQ for Elementary and Secondary Schools

3. *Reflection and discussion*. Teachers engage in private reflection and discussion with peers and the researchers about the profiles. Decisions are made as to which dimensions, if any, will be the targets for change attempts.
4. *Intervention*. Teachers introduce various strategies, typically over a period of several months, aimed at improving selected dimensions of school environment. Usually the ideas arise during meetings of teachers and from examining individual items in the instruments. Most of these ideas are specific to the schools concerned.
5. *Reassessment*. The actual form of the instrument is readministered at the end of the intervention period.

In previous research involving the WES, Fraser, Docker and Fisher (1988) reported a case study which was carried out in an elementary school with a staff of 24. After pretesting with both the actual and preferred forms of the WES, mean scale scores were calculated and pretest actual and pretest preferred profiles were fed back to the school staff. The areas in which sizable differences between actual and preferred scores were evident were Peer Cohesion, Clarity, Innovation and Physical Comfort. Consequently, following a staff meeting and considerable discussion, priorities for action were accepted (e.g. strategies for improving Clarity included making available to teachers details about the amount of money for excursions, cooking, petty cash, etc., and a simple information sheet about resource rooms). An intervention consisting of the accepted actions was implemented for approximately 10 weeks. At the end of this time, the actual form of the WES was administered to teachers a second time to determine whether there had been any changes in the work environment as perceived by teachers. The results indicated that sizable changes did occur in three of the priority areas of Peer Cohesion, Clarity and Physical Comfort.

Recently the new form of the SLEQ incorporating the Work Pressure scale was used in similar school improvement studies using the same basic strategy.

Reported below are details of a case study in an elementary school of 15 teachers. After pretesting with both the actual and preferred forms of the SLEQ, mean scale scores were calculated and pretest actual and pretest preferred profiles were fed back to the school staff. The results are depicted (Figure 2) in the form in which they were presented to a meeting of the school. Although there were sizable differences between actual and preferred scores on a number of dimensions, the areas determined by the staff for initial improvement were Resource Adequacy, Work Pressure and Innovation. Other dimensions were to be targets for a second round of change attempts.

Next, the staff was divided randomly into small groups to discuss the areas in which actual-preferred discrepancies were largest. These groups were asked to consider those areas and to make suggestions for improvement. The groups then were called together and group session leaders presented a report to the whole staff. Points were discussed at some length and the priorities for action listed in Table 4 were accepted.

An intervention consisting of the actions listed in Table 4 was implemented for approximately 10 weeks. At the end of this time, the actual form of the SLEQ was administered to teachers for a second time to determine whether there had been any changes in the work environment as perceived by teachers. The results of this assessment are also depicted in Figure 2.

On examining the profiles in Figure 2, it can be seen that sizable changes did occur in two of the priority areas. Resource Adequacy increased 2.5 raw score points (about two-thirds of a standard deviation) and Innovation increased 1.7 raw score points (about half a standard deviation). The use of *t*-tests for dependent samples revealed that each of these differences was statistically significant ($p < 0.05$).

Table 4: *Priorities for Action in Improving School Environment*

SLEQ Dimension	Priorities for Action
Resource Adequacy	Conduct a survey of resources in the school
	Develop a plan of attack - immediate, intermediary and long term
	Check and repair already existing equipment
	Develop a plan for increased sharing of resources
Innovation	Conduct staff meetings in individual classrooms. These meetings should be rotated between elementary and infant rooms. Time should be given for the class teacher to comment on organisation, display, problems, etc.
	Free teachers with particular skills to help in other rooms (drama, computers, science)
	Adopt a whole-school theme
	Attempt to 'spot the innovator' (particularly by senior staff)
Work Pressure	Have less staff meetings
	Use recess breaks for minor discussions
	Draw on the community for assistance with coaching sporting teams
	Provide opportunities for discussion about meeting the individual needs of children

However, the level of Work Pressure did not change. Nevertheless the staff was still pleased when presented with the results as they did indicate that the concentrated effort in the other two chosen areas had been worthwhile.

Conclusion

The main purpose of this paper has been to report on the development and use of the School-Level Environment Questionnaire (SLEQ). Noteworthy features of the SLEQ include its consistency with the literature, salience to practising teachers, specific relevance to schools, minimal overlap with classroom environment scales and economy. Data reported in this paper attest to each SLEQ scale's internal consistency, discriminant validity and ability to differentiate between the perceptions of teachers in different schools. Already the SLEQ has been found to be useful in investigations of differences between the climates of elementary and secondary schools and in teachers' practical attempts to improve their school environment.

It is hoped that educational researchers and teachers will make use of the widely applicable and extensively validated SLEQ in assessing the important concept of school environment and in pursuing research and practical applications related to school-level environment which are analogous to those previously completed for classroom-level environment (Fraser, 1986). For example, assessments involving the SLEQ could form the basis for studies of the effects of the school environment on such outcomes as teacher job satisfaction or student achievement or morale. Further investigations might be made of the links between students' perceptions of classroom-level environment, and teachers' perceptions of school-level environment (Fraser & Rentoul, 1982). The SLEQ is likely to provide a useful source of criteria in the evaluation of innovative or alternative educational provisions (Anderson, Walberg & Welch, 1969; Fraser, 1979; Fraser, Williamson & Tobin, 1987). In particular, teachers might use assessments of their perceptions of

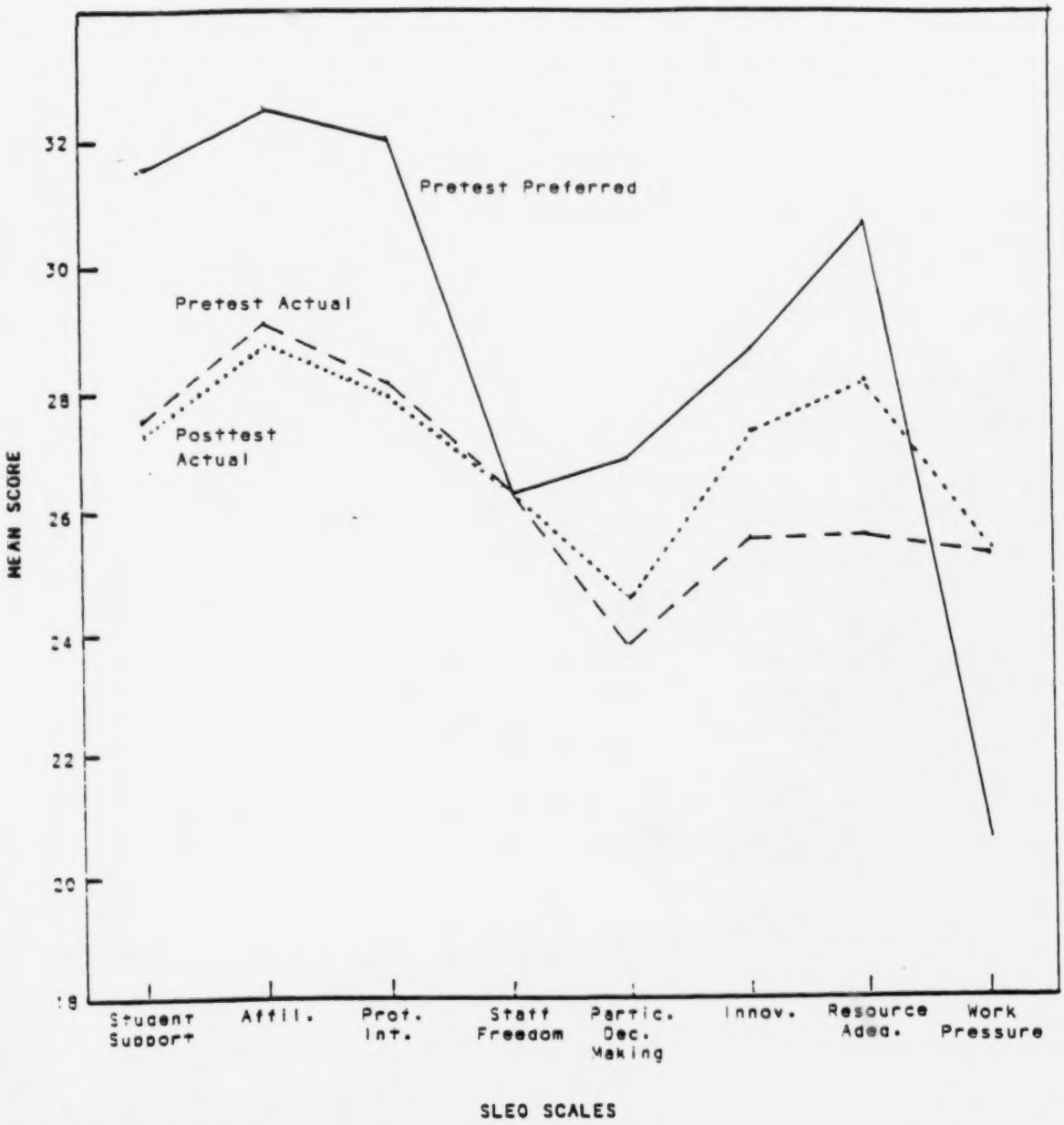

Figure 2: Profiles of Mean School Environment Scores on the SLEQ

actual and preferred school work environments as a basis for discussion of improvements in their school work settings which would reduce actual-preferred discrepancies (Fraser, 1981; Fraser & Fisher, 1986; Moos, 1981; Fraser, Docker & Fisher, 1988).

Through instruments such as the SLEQ, it is possible to tap important but subtle aspects of teachers' professional lives (e.g., Staff Freedom, Professional Interest, Affiliation, Innovation and Work Pressure). Hopefully, assessments of actual and preferred school environments, as seen through the eyes of teachers themselves, will provide a useful foundation on which teachers can base attempts to improve the quality of their school settings and professional lives.

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APPENDIX A

School-Level Environment Questionnaire (SLEQ)

Actual Form

There are 56 items in this questionnaire. They are statements about the school in which you work and your working environment.

Think about how well the statements describe your school environment.

Indicate your answer by circling:

SD if you STRONGLY DISAGREE with the statement;
D if you DISAGREE with the statement;
N if you neither agree nor disagree with the statement or are not sure;
A if you AGREE with the statement;
SA if you STRONGLY AGREE with the statement.

If you change your mind about a response, cross out the old answer and circle the new choice.

1.	There are many disruptive, difficult students in the school.	SA	A	N	D	SD
2.	I seldom receive encouragement from colleagues.	SA	A	N	D	SD
3.	Teachers frequently discuss teaching methods and strategies with each other.	SA	A	N	D	SD
4.	I am often supervised to ensure that I follow directions correctly.	SA	A	N	D	SD
5.	Decisions about the running of the school are usually made by the principal or a small group of teachers.	SA	A	N	D	SD
6.	It is very difficult to change anything in this school.	SA	A	N	D	SD
7.	The school or department library includes an adequate selection of books and periodicals.	SA	A	N	D	SD
8.	There is constant pressure to keep working.	SA	A	N	D	SD
9.	Most students are helpful and cooperative to teachers.	SA	A	N	D	SD
10.	I feel accepted by other teachers.	SA	A	N	D	SD
11.	Teachers avoid talking with each other about teaching and learning.	SA	A	N	D	SD

12.	I am not expected to conform to a particular teaching style.	SA	A	N	D	SD
13.	I have to refer even small matters to a senior member of staff for a final answer.	SA	A	N	D	SD
14.	Teachers are encouraged to be innovative in this school.	SA	A	N	D	SD
15.	The supply of equipment and resources is inadequate.	SA	A	N	D	SD
16.	Teachers have to work long hours to complete all their work.	SA	A	N	D	SD
17.	Most students are pleasant and friendly to teachers.	SA	A	N	D	SD
18.	I am ignored by other teachers.	SA	A	N	D	SD
19.	Professional matters are seldom discussed during staff meetings.	SA	A	N	D	SD
20.	It is considered very important that I closely follow syllabuses and lesson plans.	SA	A	N	D	SD
21.	Action can usually be taken without gaining the approval of the subject department head or a senior member of staff.	SA	A	N	D	SD
22.	There is a great deal of resistance to proposals for curriculum change.	SA	A	N	D	SD
23.	Video equipment, tapes and films are readily available and accessible.	SA	A	N	D	SD
24.	Teachers don't have to work very hard in this school.	SA	A	N	D	SD
25.	There are many noisy, badly-behaved students.	SA	A	N	D	SD
26.	I feel that I could rely on my colleagues for assistance if I should need it.	SA	A	N	D	SD
27.	Many teachers attend inservice and other professional development courses.	SA	A	N	D	SD
28.	There are few rules and regulations that I am expected to follow.	SA	A	N	D	SD
29.	Teachers are frequently asked to participate in decisions concerning administrative policies and procedures.	SA	A	N	D	SD

30.	Most teachers like the idea of change.	SA	A	N	D	SD
31.	Adequate duplicating facilities and services are available to teachers.	SA	A	N	D	SD
32.	There is no time for teachers to relax.	SA	A	N	D	SD
33.	Students get along well with teachers.	SA	A	N	D	SD
34.	My colleagues seldom take notice of my professional views and opinions.	SA	A	N	D	SD
35.	Teachers show little interest in what is happening in other schools.	SA	A	N	D	SD
36.	I am allowed to do almost as I please in the classroom.	SA	A	N	D	SD
37.	I am encouraged to make decisions without reference to a senior member of staff.	SA	A	N	D	SD
38.	New courses or curriculum materials are seldom implemented in the school.	SA	A	N	D	SD
39.	Tape recorders and cassettes are seldom available when needed.	SA	A	N	D	SD
40.	You can take it easy and still get the work done.	SA	A	N	D	SD
41.	Most students are well-mannered and respectful to the school staff.	SA	A	N	D	SD
42.	I feel that I have many friends among my colleagues at this school.	SA	A	N	D	SD
43.	Teachers are keen to learn from their colleagues.	SA	A	N	D	SD
44.	My classes are expected to use prescribed textbooks and prescribed resource materials.	SA	A	N	D	SD
45.	I must ask my subject department head or senior member of staff before I do most things.	SA	A	N	D	SD
46.	There is much experimentation with different teaching approaches.	SA	A	N	D	SD
47.	Facilities are inadequate for catering for a variety of classroom activities and learning groups of different sizes.	SA	A	N	D	SD
48.	Seldom are there deadlines to be met.	SA	A	N	D	SD
49.	Very strict discipline is needed to control many of the students.	SA	A	N	D	SD

50.	I often feel lonely and left out of things in the staffroom.	SA	A	N	D	SD
51.	Teachers show considerable interest in the professional activities of their colleagues.	SA	A	N	D	SD
52.	I am expected to maintain very strict control in the classroom.	SA	A	N	D	SD
53.	I have very little say in the running of the school.	SA	A	N	D	SD
54.	New and different ideas are always being tried out in this school.	SA	A	N	D	SD
55.	Projectors for filmstrips, transparencies and films are usually available when needed.	SA	A	N	D	SD
56.	It is hard to keep up with your work load.	SA	A	N	D	SD

Scoring: Underlined items are scored 1, 2, 3, 4 and 5, respectively, for the responses SA, A, N, D and SD. All other items are scored in the reverse manner. Invalid or omitted items are scored 3.